



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

A

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,509	09/26/2003	Norman H. Garrett III	190708-1010	3533
24504	7590	04/05/2005	EXAMINER	
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP			KERSHTEYN, IGOR	
100 GALLERIA PARKWAY, NW			ART UNIT	
STE 1750			PAPER NUMBER	
ATLANTA, GA 30339-5948			3745	

DATE MAILED: 04/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

<b>Office Action Summary</b>	<b>Application No.</b> 10/672,509	<b>Applicant(s)</b> GARRETT, NORMAN H.	
	<b>Examiner</b> Igor Kershteyn	<b>Art Unit</b> 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8, 9, 11-13, 16, 17, 21, 23 and 25-28 is/are rejected.
- 7) ☒ Claim(s) 5-7, 10, 14, 15, 18-20, 22 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/12/2004</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Claim Objections***

Claims 1, 17, and 24 are objected to because of the following informalities:

In claim 1, line 1, "app 11" should be --1--.

Claim 17 recites the limitation "the circumferential trough" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 24 recites the limitation "the base plate" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 11, 16, 17, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Trent (885,108).

In figures 1-6, Trent teaches an apparatus for facilitating cavitation in fluids, the apparatus comprising: a housing A having a generally hollow interior, the housing defining a first opening (not numbered) for receiving a shaft E; a rotor B disposed within the hollow interior of the housing A, the rotor B adapted to couple with a shaft E, the

Art Unit: 3745

rotor B having an exterior surface, the rotor defining a first opening (not numbered) disposed on the exterior surface and a second opening (not numbered) with a fluid passage **c** extending therebetween, wherein the fluid passage **c** facilitates cavitation in a fluid.

**Notes.**

1. The language of the preamble in claim 1 reciting “for facilitating cavitation in fluids” are not considered as limitations of the respective claims, and the claims that are dependent on the above claims, because bodies of the claim 1 do not directly include the structure of the “for facilitating cavitation in fluids”. See MPEP 2111.02 [R-2] PREAMBLE STATEMENTS RECITING PUR-POSE OR INTENDED USE.

2. The language “wherein the fluid passage facilitates cavitaion in a fluid”, recited in claim 1, does not differentiate the apparatus of claim 1 from the prior art because prior art as shown above teaches all structural limitations of claim 1, See MPEP 2114 [R-1] Apparatus and Article Claims — Functional Language.

Claims 1-4, 8, 13, 17, 21, 25, 27, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Thompson et al. (4,294,549).

In figures 1-3, Thompson et al. teach an apparatus for facilitating cavitation in fluids, the apparatus comprising: a housing 10,11 having a generally hollow interior, the housing defining a first opening (not numbered) for receiving a shaft 21; a rotor 20 disposed within the hollow interior of the housing 10,11, the rotor 20 adapted to couple with a shaft 21, the rotor 20 having an exterior surface 36, the rotor defining a first

Art Unit: 3745

opening (not numbered) disposed on the exterior surface 36 and a second opening (not numbered) with a fluid passage 19 extending therebetween, wherein the fluid passage 19 facilitates cavitation in a fluid (See column 8, lines 36-46).

Claims 1-4, 8, 9, 12, 13, 16, 17, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Pope (5,341,768).

In figures 1-4, Pope teaches an apparatus for facilitating cavitation in fluids, the apparatus comprising: a housing 12 having a generally hollow interior, the housing 12 defining a first opening (not numbered) for receiving a shaft 34; a rotor 10 disposed within the hollow interior of the housing 12, the rotor 10 adapted to couple with a shaft 34, the rotor 10 having an exterior surface 28, the rotor defining a first opening 40a disposed on the exterior surface and a second opening 40b with a fluid passage 40 extending therebetween, wherein the fluid passage 40 facilitates cavitation in a fluid.

**Note.** See Notes 1 and 2 above.

Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Ebihara (5,975,843).

In figures 1, 2A and 2B, Ebihara teaches an apparatus for creating vapor bubbles in a fluid, the apparatus comprising: a rotor 24 having a front face (not numbered) and an opposed rear face (not numbered) and having an exterior surface (not numbered) extending longitudinally therebetween, the rotor defining a plurality of irregularly spaced cavities 24b disposed on the longitudinal exterior surface.

Art Unit: 3745

**Note**. See note 1 above.

Claims 25 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Griggs (5,957,122).

In column 8, lines 5-12, Griggs teaches a method for facilitating cavitation in a fluid, the method comprising the steps providing a fluid; inducing tensile stress in the fluid for facilitating controlled cavitation through rotation, further including the step of: controlling the collapse of vapor bubbles formed during cavitation.

#### ***Allowable Subject Matter***

Claims 5-7, 10, 14, 15, 18-20, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 24 would be allowable if rewritten to overcome claim objection.

#### ***Prior Art***

Prior art made of record but not relied upon is considered pertinent to Applicant's disclosure and consist of two patents.

Thut (4,789,230) is cited to show an apparatus having a housing, and a rotor, the rotor having a void and a plurality of passages.

Murray (5,599,164) is cited to show an apparatus having a housing, and a rotor, the rotor having a void and a plurality of passages.

Art Unit: 3745

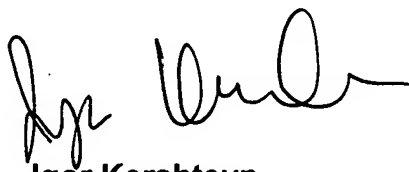
***Contact information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kershteyn whose telephone number is **(571)272-4817**. The examiner can be reached on Monday-Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached on **(571)272-4820**. The fax number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308 0861.

IK  
March 28, 2005

A handwritten signature in black ink, appearing to read 'Igor Kershteyn', written in a cursive style.

**Igor Kershteyn  
Patent examiner.  
Art Unit 3745**